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THE CARE OF THE SKIN:

A LECTURE BEFORE THE Y. M. C. A. LYCEUM.

BY

J. CLARK MCGUIRE, M. D.

*Dermatologist to the Louisville City Hospital and the  
Masonic Orphans and Widows' Home.*

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*Reprint: American Practitioner and News.*

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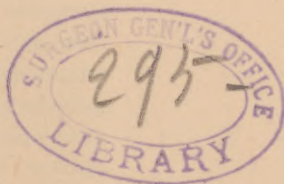
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## THE CARE OF THE SKIN.

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That we may better appreciate the importance of the proper care of the skin, it is well to know something of the anatomy and physiology of this, one of the most important and complex organs of the body.

It is practically divided into two parts, the outer cuticle, scarfskin or epidermis, and the deeper true skin or corium. The epidermis is subdivided into the corneous layer, composed of flat, lifeless, colorless cells, and the malpighian layer (so named from the anatomist Malpighi), of irregular shaped cells, developing to replace those of the outer layer that have been cast off. The true skin or corium (from the Latin *corium*, leather), is divided into the outer papillary layer, made up of little elevations called papillæ, intended to give a greater amount of surface to the skin. It has been computed that there are about one hundred and fifty millions of these over the

whole body; below this is the reticulated layer (from the Latin *reticulatus*, net-like or latticed), made up of elastic interlacing fibers, the meshes of which become larger and larger until we reach the subcutaneous tissue which connects the skin with the parts beneath. The corium is well supplied with blood-vessels, lymphatics, nerves, glands, and hairs. The arteries from below send off little capillary loops, which ascend in the papillæ, then descend to become veins; they are called capillary from the Latin word *capillaris*, like a hair, they are so small and slender. Some of the nerves send off prolongations that become lost in the deeper cells of the epidermis; others enter the papillæ to wind around and penetrate little bodies called tactile corpuscles. There are two varieties of glands, the sudoriparous, and sebaceous glands; the sudoriparous derives its name from two Latin words, *sudor* (sweat), and *pario* (I produce)—they are made up of tubes twisted in the form of a coil in the lower part of the corium, with a duct ascending through the entire thickness of the skin to open upon its surface; they are most numerous on the palms of the hands, where there are about two thousand seven hundred

to the square inch, or about two million three hundred and eight thousand over the whole body, an entire length of secreting tubes of two and one third miles. The sebaceous glands are made up of a mass of lobules, with a tube that usually enters a hair follicle.

The *hairs* are regarded as modified epidermis. Almost the entire skin is provided with these appendages, except the palms, soles, and some other parts. They receive their nourishment and grow from the hair papillæ which they surround in the corium. The total number on an average head of hair is said to be one hundred and twenty thousand. They are elastic, stretching about one third their length, and will support a weight of about two and a half ounces. In some cases they may grow to great length and in unusual quantity. As to blanching of the hair in the course of a few hours, there are but few well-authenticated cases; in one mentioned in Flint's Physiology, the hairs turned white in the course of the night, in a patient under observation at a hospital; he was suffering with delirium tremens. The blanching is caused by the accumulation of air in the medulla and cortex of the hair, there is no diminution in the amount of pig-



ment. Sir Erasmus Wilson has reported the case of a young woman in whom the hairs covered almost the entire surface of the body, and were thick enough to conceal the skin. Cases are reported in which the beard grew to the length of seven or eight feet.

So much for the anatomy of the skin. It is usually regarded simply as a covering for the parts beneath, and to give shape to the form, but, as has been seen, it has functions peculiar to itself. It is an *organ of sensation*, especially of touch. This sense can be cultivated to a wonderful degree. We may see this exemplified at the blind asylum, where the inmates are taught not only to read, but to study geography, botany, and anatomy by means of models, through this sense alone. It has been related of a blind sculptor, that he could model the most perfect likeness simply by touching the face, and of others who could even tell the color of objects in the same way.

It is an *organ of absorption*; gases as well as liquids are taken up by the skin. This is shown in the case of animals whose bodies were subjected to carbonic-acid gas, their heads remaining free. Death from the poison soon resulted. The power the skin has of absorb-



ing fats and oils is taken advantage of in the treatment of many diseases. Shipwrecked sailors have relieved their intense thirst to a certain extent by saturating their clothes with the salt water.

The skin is an *organ of secretion*. Sweat is constantly poured out in the form of insensible perspiration, in amount about two pints or pounds in twenty-four hours. It has a saline taste, and is alkaline in reaction; composed almost entirely of water, it regulates the temperature to a great extent by the amount that is secreted. In the functional disorder of the sweat glands, known as bromidrosis, it has an offensive, disgusting odor, that will render a patient not only a burden to himself, but repugnant to every one with whom he comes in contact. It is said of Henry IV, of England, who suffered from this affection, that the ladies of his court would faint from the offensive odor when in his presence. Professor Hammond relates the case of a woman who exhaled the odor of violets during an attack of hysteria. In another functional disorder of the glands, known as chromidrosis, it may be colored black, blue, or red, or it may become phosphorescent; the body then becomes luminous in the dark. The

secretion from the sebaceous glands, known as sebum, is a semi-fluid substance containing fifty per cent of fatty matter, and is intended to give softness to the skin. The so-called "flesh-worms," or "grubs," are really masses of sebum which clog up the follicles; the little black-heads are caused by an accumulation of dirt and pigment.

It is an interesting fact, that if animals are covered with an impermeable substance, death will soon ensue. It is related that a child's death was caused at the coronation of Pope Leo X, by being covered with gold-leaf to represent an angel.

Considering the important functions the skin has to perform, and the harm that will result from the non-performance of these functions, the importance of its proper care can hardly be overestimated. It is true that "beauty usually produces love, but cleanliness will preserve it." Cleanliness is absolutely essential to the correct performance of the functions of the skin and the preservation of the general health. The dust, secretions, and the cast-off epithelial scales must be removed by frequent washing. This brings us to the subject of baths and soaps. The ancients indulged more freely in

the bath than is the custom with us. The Romans especially fully appreciated the pleasures and necessity of the bath, and indulged in it to excess. They erected magnificent buildings, supplied with all the requisites for hot, cold, and vapor baths. From the ruins, as we now see them, we can form but an inadequate idea of their splendor. Buildings, including libraries, gymnasiums, and baths, were free to the public. Women have endeavored to beautify their skin by bathing in milk and scented waters. To such an extent was this carried in Paris at one time, that there was great scarcity of milk for the table. I know of a well-known *prima-donna* who uses a quart of cologne in each bath. Turkish baths I do not believe are necessary for a healthy skin. Any of you gentlemen who propose to indulge in this *luxury* should postpone reading Mark Twain's experience till you have tried it for yourselves. I am sure you can then better appreciate his advice to the attendant to use a jack-plane as a much simpler method of getting rid of the skin, which seemed to be the object of the bath.

Time will not allow me to say any thing further as to the use of the bath than to ad-

vise you, after a cold bath, to use brisk friction with a towel, not only to further cleanse the skin, but to excite the cutaneous circulation, and so draw the oversupply of blood from the internal organs. Those suffering from heart troubles should abstain from the use of the hot bath, as the heat will cause a determination of blood to the surface, and so deprive the heart of its normal supply. Soaps, as you know, are made of fats or oils and soda or potash caustics, according as they are hard or soft. Their efficacy depends upon their power of rendering grease and *débris* soluble in water. Only the best soaps should be used for the toilet, as the cheaper ones are often found to contain deleterious ingredients. In specimens I have examined, by means of the microscope, I have found little particles of bone and other foreign matter. Of course these will render a soap highly irritating to the skin.

There is a popular error that soap should not be used upon the face. There is no good reason for this belief; in fact, it is more important on the face than elsewhere. Not only is the face the most exposed portion of the body, but there is a greater amount of secretion here than elsewhere on the body to catch the dust.

It has been said that country girls wash their faces and do not have acne. City girls abstain from the use of soap, and do. Though this is exaggerated, I have met with cases that have been aggravated by neglect of this part of the toilet.

There is an old saying, "Women who paint their faces to seem beautiful, do early deface the image of their Creator;" and yet they will frequently resort to any means that hold out the least hope of improving their complexions, such as plastering their faces with paste, enameling, binding it in raw beef, and even wearing medicated masks. The purpose of most of these applications is simply to conceal repulsive blemishes, which, in the majority of cases, could be readily removed by appropriate treatment. Such methods can only do harm; for if they do not directly injure the skin, they make it tender, and much more apt to be affected by external agencies. To make their hands white and bloodless, women have been known to spend the night with them suspended by means of pulleys.

I am frequently asked, are dusting powders harmful? Most of them are, for they are liable to contain lead, bismuth, or other deleterious in-

gredients. Plain starch or magnesia are the least harmful. I advise against the use of any of them, as they will clog up the openings of the glands, and so are apt to prevent the performance of their proper functions. If the face is abnormally greasy, a little sulphate zinc in water and alcohol, as a lotion, will be found of benefit. "Lotions for the toilet," as found in the shops, are liable to contain mercury. This may be absorbed and produce symptoms of constitutional poisoning. What is known as "flake white" is made by mixing carbonate of lead with rose water. Cases are not infrequently reported of women who have been poisoned, showing symptoms of the constitutional effects of the lead. Some of the symptoms are delirium, abdominal pain, a peculiar drop of the wrist, and a characteristic blue line along the edge of the gum. The study of skin diseases is sadly neglected, though its importance is recognized and exemplified in the vast number of cases reported by even a few specialists. Members of the American Dermatological Association, in 1885, reported sixteen thousand eight hundred and sixty three cases. Twenty thousand new cases are said to occur in one year among the poor of New York City. Prof. Bulkley, of

New York, has published a book of two hundred and fifty pages upon one disease alone, known as "Acne."

I will now give you a few hints upon the treatment of several minor affections of the skin. The little "black-heads," papules, and pustules that frequently appear on the face in young people are best treated in the following manner: The papules and pustules should be opened; the face is then to be bathed in hot water, as hot as can be borne. The black-heads are to be removed by means of a watch key, or squeezed out between the fingers. A powder composed of sulphur, one dram to the ounce of starch, dusted on the face at night will be found of benefit in some cases. The annoying complaint known as *rosacea*, popularly known as "rum blossom," so called, perhaps, because the majority of cases are NOT caused by stimulants, is characterized by redness of the nose and cheeks, with dilatation of the blood-vessels. The disease may last indefinitely and cause hypertrophy of the nose, till in rare cases it may grow as large as the fist. Its causes are numerous, as digestive disturbances, nervous troubles. Alcohol is only one of many causes. It is more or less common in those subject to sudden changes in



temperature, as hack-drivers; it may be aggravated by certain articles of food, as fried articles, tea, coffee, etc; it is apt to continue indefinitely unless properly treated. Hot water applications will do good in many cases, and a lotion composed of sulphur, fifteen grains, glycerine, one dram, rose water, one ounce, used several times a day. Operative procedures may be necessary.

*Bromidrosis* may at times be relieved by means of a dusting powder composed of half a dram of salicylic acid to the ounce of starch, or by means of a lotion of permanganate of potash, a grain or two to the ounce of water. The socks must be soaked in this solution, then dried before being worn.

*Discolorations*, such as freckles, and so-called "liver spots," should be let alone, for even if they are removed by strong stimulating remedies, the chances are decidedly in favor of their return.

\* *Dandruff* is best removed by paying strict attention to cleanliness, removing the scales by means of soap and water, and then by using a stimulating application, such as half an ounce of tincture cantharides to the ounce of bay rum. This is an excellent application for premature baldness.

*Itching of the skin, or pruritus*, may accompany many different diseases, but it may occur as the sole disorder. Very little can be done in the way of home management for this disease. A weak solution of carbolic acid, a few grains to the ounce, or alkaline baths, composed of a dram of bicarbonate soda to the pint of water, may be tried.

Many of you are familiar with the annoying affection known as *urticaria*, nettle rash, or hives. It is characterized by the sudden appearance of white or red elevations of the skin, accompanied by the most intense itching. It is caused by gastric disturbances, by the ingestion of certain articles of food in some individuals, such as fish, berries, shell fish, nervous disturbances, etc. As to treatment, if caused by indigestion, emetics and aperients should be given; locally, vinegar and water, whisky, alkaline baths, and carbolic acid lotions, a few grains to the ounce, may relieve the itching.

It is well known that many *dye stuffs* may cause inflammations of the skin and even constitutional poisoning. Colored stockings have been found to contain poisonous quantities of arsenic and antimony. I have seen many cases of eczema produced in this way in those who

are predisposed to the disease, not only from colored stockings, but from the red lining of gloves, hats, and shoes, and colored underclothing. In the latter case they were worn before being washed. The condition of the skin is very similar to that produced by poison oak. The treatment consists in removal of the cause and the application of soothing remedies.

*Hair-dyes*, as a rule, are harmful. They may not only cause baldness from the lime, lead, or silver which they contain, but the lead may be absorbed and act injuriously on the system. The confidence with which a bald headed man will use a hair restorer, recommended by a bald-headed barber, has been referred to as a sublime example of faith-cure. Read the experience of Tittlebat Titmouse in "Ten Thousand a Year," and I am sure you will hesitate before using hair-dyes.

The Massachusetts State Board of health has had a large number of so-called hair restorers, now on the market, analyzed. It was found that all that were examined contained lead in varying quantities. Ladies suffering from *hirsuties*, or an abnormal amount of hair, will resort to any means to get rid of this blemish. They usually shave or extract the hairs, but this only acts as

a stimulant to renewed growth. So-called depillatories are worse than useless. They contain ingredients that have the power of dissolving the hair; but, if we remember the anatomy of the skin, it is evident that it is impossible for them to reach the papillæ, from which the hair receives its nourishment, without destroying the whole thickness of the skin. The only means by which the hairs can be permanently removed is the method now resorted to by dermatologists, known as electrolysis. A fine needle is inserted into the hair follicle down to the papilla, which is destroyed by the passage of an electric current from the negative pole of a galvanic battery. Five thousand hairs have been removed from a lady's face by this means, resulting in permanent relief of the trouble.

The habit of cutting the hair and wearing a wig is not to be advised, for the advantage derived from the cutting is often more than counterbalanced by depriving the hairs of light and air which are necessary to their healthy growth. I would sum up this whole question by the advice: keep as clean as possible; remember the aphorism, cleanliness is next to godliness; abstain from the use of any local application, unless it is absolutely necessary, but on the other

band the injurious use of the bath for the purpose of cleansing the skin may be followed by an irritable and abnormal condition of the cuticle.

In closing my lecture I desire to make a few remarks upon some popular errors in regard to skin disease. The majority are regarded as contagious, and the fear is expressed that those who come in contact with the afflicted are liable to become affected; but this is far from the truth, for out of the hundred or more diseases that may affect this organ only two or three are really contagious. The laity believe that as a rule cutaneous diseases result from "bad blood," the impurities of which find exit through the skin, and in so doing take the form of an eruption. Consequently it is harmful to remove them. I have had patients express themselves as very solicitous about the sudden cure of a disease of the skin; the consequence, in their opinion, might be disastrous by the "driving in" of a disease that might attack some internal organ. Nothing could be more absurd, for it is absolutely impossible in this sense to either "drive in" or "drive out" a skin disease. The blood has little to do with skin diseases. There are diseases as peculiar to this organ as to any other,

entirely localized, depending upon changes in the tissues themselves. Others are caused by parasites; still others by nervous disturbances. It is evident that the much lauded "blood purifiers" for cutaneous diseases are, to say the least, useless. A patient may get well while taking these quack nostrums; the fact is then extensively advertised. This is about on a par with the announcement of lottery companies of the fortunate individuals who have obtained prizes; the tens of thousands who are not so fortunate are never heard from.







